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WHAT IS CLAIMED IS:

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1. A capacitor element configured to mount a semiconductor element thereon, said capacitor element comprising:

10 a base; and
 a capacitor part provided on said base,
 wherein said base is made of a resin whose
coefficient of linear expansion is adjusted in accordance
with a coefficient of linear expansion of the
semiconductor element.

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2. The capacitor element as claimed in claim 1,
20 wherein the capacitor part includes two opposing
electrodes and a dielectric layer interposed therebetween.

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3. The capacitor element as claimed in claim 1,
wherein the base is made of an epoxy resin including a
filler for adjusting a coefficient of linear expansion of
the epoxy resin to fall within a range of 5-30 ppm/K.

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4. The capacitor element as claimed in claim 1, wherein the base is made of a polyimide resin including a filler for adjusting a coefficient of linear expansion of the polyimide resin to fall within a range of 5-30 ppm/K.

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5. The capacitor element as claimed in claim 1, wherein the base is made of a thermoplastic liquid crystal polymer whose coefficient of linear expansion is within a range of 5-30 ppm/K.

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6. The capacitor element as claimed in claim 1, wherein the base is made of a resin including aramid fiber for adjusting a coefficient of linear expansion of the resin to fall within a range of 5-30 ppm/K.

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7. The capacitor element as claimed in claim 1, wherein the base is made of a resin whose coefficient of linear expansion is within a range of 5-30 ppm/K.

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8. In combination, the capacitor element as claimed in claim 1, and a semiconductor element mounted on

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the capacitor element.

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9. A method of manufacturing a capacitor element, comprising the steps of:

applying on a surface of a base material a base made of a resin whose coefficient of linear expansion is
10 adjusted in accordance with a coefficient of linear expansion of a semiconductor element mounted on said capacitor element;

forming vias in the base;
forming a conductive layer on a top surface of
15 the base;

patterning the conductive layer so as to form terminals filling in the vias and lower electrodes extending to the top surface of the base;

forming a dielectric layer on said lower
20 electrodes;

forming a conductive layer on a top surface of the dielectric layer; and

patterning the conductive layer so as to form on the dielectric layer an upper electrode opposing said
25 lower electrodes and so as to form a terminal having an exposed top surface.

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10. The method as claimed in claim 9, further comprising the step of releasing the base material to thereby form the capacitor element.

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5 11. A semiconductor device substrate on which a
semiconductor element may be mounted, said semiconductor
device substrate comprising:
 a substrate body having a bottom surface that
serves as a mounting surface in which external connection
10 terminals are arranged; and
 a capacitor element including:
 a base made of a resin whose coefficient of
linear expansion is adjusted in accordance with the
semiconductor element to be mounted;
15 a capacitor part including two opposing
electrodes and a dielectric layer interposed therebetween;
 a plurality of terminals in a top surface
of the capacitor element; and
 a plurality of terminals in a bottom
20 surface of the capacitor element,
 the capacitor element being embedded in the
substrate body, a top surface of the capacitor element
being exposed at a top surface of the substrate body and
serving as a surface on which the semiconductor element
25 may be mounted.

30 12. A semiconductor device, comprising:
a semiconductor device substrate as claimed in
claim 11; and
a semiconductor element,

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the semiconductor element being mounted on a top surface of the semiconductor device substrate at which the capacitor element is exposed.